



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,096	09/19/2006	Tohru Nakagawa	14434.100USWO	4049
53148 7590 10/08/2008 HAMRE, SCHUMANN, MUELLER & LARSON P.C. P.O. BOX 2902-0902 MINNEAPOLIS, MN 55402				
EXAMINER RODGERS, COLLEEN E				
ART UNIT 2813		PAPER NUMBER		
MAIL DATE 10/08/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,096

Applicant(s)

NAKAGAWA, TOHRU

Examiner

Colleen E. Rodgers

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10, 11 and 14-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10, 11, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 14-17, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 09/19/2008
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 10 and 11 in the reply filed on 12 June 2008 is acknowledged. Additionally, claims 1-9, 12 and 13 are canceled by Applicant and claims 14-21 are newly added.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 10, 11, 18 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by **Seki** (USPN 6,911,773).

Regarding claim 10, **Seki** discloses a method of manufacturing a field effect transistor including an organic semiconductor layer and an organic insulating layer that adjoins the organic semiconductor layer, the method comprising the steps of:

(i) applying a coating liquid including a solvent as well as first and second organic molecules that have been dissolved in the solvent [see col. 22, lines 39-48]; and

(ii) forming a first layer and a second layer by removing the solvent contained in the coating liquid that has been applied, the first layer containing the first organic molecule as its main

component and the second layer adjoining the first layer and containing the second organic molecule as its main component [see col. 24, lines 9-13],

wherein the first organic molecule is a semiconductor material or a precursor of a semiconductor material [specifically polyethylenedioxythiophene],

the second organic molecule is an insulator material or a precursor of an insulator material [specifically polystyrene sulfonic acid], and

the first organic molecule and the second organic molecule are not compatible with each other.

Regarding claim 11, **Seki** discloses the method of claim 10, further comprising converting the first layer into an organic semiconductor layer by treating the first organic molecule contained in the first layer [see col. 24, lines 9-13],

wherein the first organic molecule is a precursor of a semiconductor material.

Regarding claim 18, **Seki** discloses the method of claim 10, furthermore wherein the first organic molecule is a polythiophene derivative [see col. 22, lines 39-48].

Regarding claim 19, **Seki** discloses the method of claim 18, furthermore wherein the second organic molecule is a polystyrene derivative [see col. 22, lines 39-48].

Allowable Subject Matter

4. Claims 14-17, 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. The following is a statement of reasons for the indication of allowable subject matter: regarding claims 14-17, the prior art of record fails to teach or make reasonably obvious wherein one

of the first organic molecule and the second organic molecule comprises at least one group selected from a hydrocarbon group and a fluorocarbon group; and regarding claims 20 and 21, the prior art of record fails to teach or make reasonably obvious wherein the first organic molecule is a pentacene derivative.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colleen E. Rodgers whose telephone number is (571) 272-8603. The examiner can normally be reached on Monday through Friday, 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew S. Smith/
Supervisory Patent Examiner, Art Unit
2823

/C. E. R./
Examiner, Art Unit 2813